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THE ACCIDENT AT THREE MILE ISLAND

MARK P. WIDOFF*

On March 28, 1979, the Three Mile Island (TMI) Nuclear Power Plant in Pennsylvania was the site of the first major nuclear accident in the United States.¹ Fuel rods in reactor core unit 2 (TMI-2) melted because of a coolant loss. The meltdown caused highly radioactive fission byproducts and uranium pellets to be released into the water coolant system and into the atmosphere.² The public concern over the TMI accident, however, was not confined to the immediate area surrounding the nuclear power plant. National concern over the safety of nuclear power developed because the builder of the damaged TMI-2 and the undamaged TMI unit 1 (TMI-1), Babcock and Wilcox, had built several plants in different locations around the country.³

It is too early to determine whether the TMI accident will contribute to the eventual decline in the use of nuclear fission as a means of generating electricity or whether it will prompt greater achievement within the industry. Nevertheless, this paper draws some tentative conclusions from the developments to date.

I. FINANCIAL RAMIFICATIONS

The financial ramifications of a major nuclear reactor accident are so severe that it is practically impossible for even the largest electric utility company to bear them.⁴ Thus, if the industry is to survive, individual companies will have to obtain more extensive insurance

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1. N.Y. Times, Mar. 29, 1979, § 1, at 1, col. 3.

2. *Id.*, Mar. 30, 1979, § 4, at 22, col. 3.

3. *Id.* For example, California Governor Brown asked the Nuclear Regulatory Commission [hereinafter referred to as NRC] to shut down temporarily the Rancho Seco nuclear power plant, built by Babcock and Wilcox, because he was concerned with potential generic defects in the plant. *Id.*, Apr. 2, 1979, § 1, at 1, col. 5.

4. See notes 105-12 *infra* and accompanying text for a brief discussion of the financial impact of the TMI accident on General Public Utilities [hereinafter referred to as GPU]. See also N.Y. Times, Jan. 13, 1981, § 4 (Business Day), at 1, col. 1, for an overview of GPU's financial woes after the TMI accident.

protection than previously was thought necessary. Industry survival also depends on a full-scale review of the Atomic Energy Damages Act, also known as the Price-Anderson Act,⁵ which imposes limits on liability for nuclear accidents resulting from the operation of federally licensed, private nuclear power plants.

The electric utility industry's concern is illustrated by the costs incurred as a result of the TMI accident. The \$300 million property damage insurance coverage on TMI-2 will be inadequate to repair the damage and to restart or dismantle the reactor.⁶ The owners of TMI-2, General Public Utilities (GPU), estimate that their cleanup and restart costs will exceed \$1 billion⁷ and will extend over a period of six to eight years.⁸ The regulatory commissions in Pennsylvania and New Jersey, the states served by the reactor, have indicated an unwillingness to allow GPU to pass these costs on to its customers.⁹ GPU, therefore, is seeking financial assistance from the federal government to cover its uninsured liability.¹⁰ Further, GPU has lost money on its original investment of nearly \$1 billion expended for the construction of TMI-1 and TMI-2,¹¹ because the regulatory commissions have been unwilling to allow GPU to exact a return from its customers for plants that are not producing electricity.¹² Since utility companies will be unwilling and unable to face such financial risks in the future,¹³ insurance protection under Price-Anderson must be reevaluated, particularly the unrealistically low \$500 million limit on liability coverage for injury due to nuclear accident.¹⁴

Because production at both TMI-1 and TMI-2 ceased after the

5. The Atomic Energy Damages Act [hereinafter referred to as Price-Anderson Act] is codified at 42 U.S.C. § 2210 (1976). The United States Supreme Court upheld the constitutionality of the Price-Anderson Act in *Duke Power Co. v. Carolina Envt'l Study Group, Inc.*, 438 U.S. 59 (1978). The Court stated that Congress' intent to encourage private participation in the development and exploitation of nuclear energy was ample justification for treating persons injured in a nuclear accident differently from those injured by other causes. *Id.* at 93.

6. N.Y. Times, *supra* note 4, at 11, col. 1.

7. *Id.*

8. *Id.*

9. *Id.* See notes 92-109 *infra* and accompanying text for a discussion of state regulatory response.

10. *Id.* See generally Chrysler Corporation Loan Guarantee Act of 1979, 15 U.S.C.A. §§ 1861-75 (West Supp. 1980) for an example of federal bailout of a private corporation.

11. GPU has declared its original investment in TMI, including fuel, to be \$780 million. N.Y. Times, Apr. 3, 1979, § 1, at 16, col. 1.

12. See notes 99-115 *infra* and accompanying text.

13. See N.Y. Times, *supra* note 4, at 1, col. 3.

14. 42 U.S.C.A. § 2210(c) (West Supp. 1980).

accident,¹⁵ GPU has had to purchase power on the grid¹⁶ at an enormous cost.¹⁷ The Pennsylvania and New Jersey regulatory commissions, however, were willing to pass these repurchase costs along to GPU customers.¹⁸

The TMI accident also has forced both the Nuclear Regulatory Commission (NRC) and the industry to revise their views on the kinds of protection needed to avoid major accidents in the future. The NRC and the industry underestimated the potential for serious nuclear accidents prior to the TMI accident and had no plan to deal with such situations. "Class 9" accidents,¹⁹ the most serious kind, no longer will be dismissed as improbable. Thus, expensive retrofiting²⁰ and redesigning, evacuation and communication plans, and legal efforts have begun.²¹ These additional expenditures for new plans and the unprecedented cost of borrowing money have discouraged new construction.

The decision to cancel or forgo new orders has become an economic necessity for most pronuclear utilities.²² Consequently, the revitalization of nuclear industry urged by President Reagan²³ will take place only with federal assistance. Thus, the financial impact of the TMI accident on utility company planners is significant.

While the effects of the accident on health will not be known for many years, the newly perceived risk of a major accident already is having a profound impact on the nuclear power option. If nuclear power can be made safe only at a prohibitive cost, it ceases to be a

15. See *Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co.*, [1979] 29 PUB. U. REP. (PUR 4th) 502, 507.

16. This article uses the phrase "purchasing power on the grid" to refer to the procedure of buying surplus electricity generated by other utility companies.

17. See, e.g., Grygiel & Zarillo, *Three Mile Island: The New Jersey Regulatory Response*, 106 PUB. UTIL. FORT. 13, 24-25 (1980).

18. See notes 99-115 *infra* and accompanying text.

19. See *In re Offshore Power Systems*, 8 NUCLEAR REG. COMM'N ISSUANCES 194, 209-10 (1978) for a discussion of "Class 9" accidents.

20. Retrofitting involves furnishing a reactor with new equipment that had been unavailable at the time of original manufacture. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1940 (1976).

21. See generally *Statement of Policy: Further Commission Guidance for Power Reactor Operating Licenses*, 12 NUCLEAR REG. COMM'N ISSUANCES 654, 650-61 (1980).

22. For example, GPU has announced the cancellation of the Forked Rivers Nuclear Project in New Jersey. N.Y. Times, *supra* note 4, at 11, col. 1. Four hundred million dollars had been spent on the facility. *Id.*

23. See N.Y. Times, Aug. 16, 1981, § 1, at 1, col. 5, for a discussion of the draft of the Reagan Administration's nuclear energy policy that expressed an intention "to remove governmental barriers to the wider use of nuclear energy." *Id.*

viable energy option.²⁴ A general overview of the various lawsuits filed in the wake of the TMI accident follows. This article does not attempt to analyze any particular case in detail. Rather, it seeks to alert the reader to the general thrust of the TMI litigation, for each suit has a far-reaching financial impact on the nuclear power industry.

II. CIVIL LIABILITY

Shortly after the TMI accident, individual and class action suits were filed in the United States District Court for the Middle District of Pennsylvania against the owners, operators, designers, constructors, and maintainers of TMI. Eventually, these actions were consolidated into one class action suit, *In re Three Mile Island Litigation (TMI)*.²⁵

A. Class Action Status

Three separate classes were alleged in this tort action.²⁶ The first two have been certified by the court.²⁷ Class I, which consists of business entities within a twenty-five mile radius of TMI, claims damage to ongoing business operations.²⁸ Substantial disruption of business activity occurred for several days following the accident.²⁹ If liability is established, damages, such as lost profits, will be reasonably easy to establish in the usual manner.³⁰

Class II, which consists of natural persons within a twenty-five mile radius of TMI, claims damages relating to evacuation expenses, loss of wages, and loss of value to real property due to the TMI acci-

24. For further information on the financial consequences of the accident, see COMPTROLLER GENERAL OF THE UNITED STATES, *THREE MILE ISLAND: THE FINANCIAL FALLOUT* (1980). For evaluations of the precarious financial condition of the corporate owners of TMI and the very real threat of bankruptcy, see N.Y. Times, *supra* note 4, at 11, col. 1.

25. 87 F.R.D. 433 (M.D. Pa. 1980). The procedural matters arising from the several actions were first heard by John Havas, Magistrate, United States District Court for the Middle District of Pennsylvania. His findings and recommendations are found in Report of Magistrate, *In re Three Mile Island*, No. 79-432 (M.D. Pa., Jan. 24, 1980) [hereinafter cited as Report of Magistrate].

26. 87 F.R.D. at 435. Certification, or denial thereof, was based on the recommendations of Magistrate Havas. *Id.* at 434. See notes 28-36 *infra* and accompanying text for a discussion of the magistrate's recommendations and Judge Rambo's decision on each class.

27. 87 F.R.D. at 438-40.

28. *Id.* at 435.

29. See N.Y. Times, *supra* note 11, at 14, col. 5.

30. See 22 AM. JUR. 2d. *Damages* §§ 175-178 (1965).

dent and its aftermath.³¹ It is estimated that 636,000 people live within the twenty-mile radius and that a significant percentage were evacuated.³² If less than one-half of this estimated number were evacuated at a hypothetical cost per person of \$100, the evacuation costs alone would involve a claim of \$30 million.

Class III consists of those who suffered personal injury or emotional distress, those who are threatened with personal injury or emotional distress, and those who will require medical detection services because of possible exposure to radiation.³³ This class claims damages for medical expenses, pain and suffering, and other injury.³⁴ In a memorandum opinion and order dated July 10, 1980, Judge Sylvia H. Rambo refused to certify this class because, under the circumstances, there could be no "finding that 'a class action [would be] superior to other available methods for the fair and efficient adjudication of the controversy.'" ³⁵

B. *Relationship of State and Federal Law*

While *TMI* is a tort action composed of claims for recovery based on Pennsylvania tort law,³⁶ federal statutory law will have an important role in the litigation. Pennsylvania law will define defendants' standard of care,³⁷ but the Federal Atomic Energy Act of 1954³⁸ and Price-Anderson are crucial to the jurisdiction of the

31. 87 F.R.D. at 435.

32. See N.Y. Times, Apr. 5, 1979, § 2, at 14, col. 1.

33. 87 F.R.D. at 435.

34. Report of Magistrate, *supra* note 25, at 2.

35. 87 F.R.D. at 441 (quoting FED. R. CIV. P. 23(b)(3)). Judge Rambo asserted that "the causation element of plaintiff's physical injury/emotional distress claims will require individual proof. In effect, the class action would break up into separate suits." *Id.* at 441-42. For example, one Class III deponent claimed that she secured an abortion because she feared the effects of TMI's radiation and that she suffered physical and emotional injury. *Id.* at 440-41. Another claimed the TMI accident had caused her such emotional stress that she developed high blood pressure. *Id.* at 441. The final Class III deponent claimed her family had suffered minor illnesses such as diarrhea and nausea. *Id.*

36. Magistrate Havas stated that the legislative history of Price-Anderson shows that the Act "permits retention of State law with respect to the cause of action and the measure of damages." Report of Magistrate, *supra* note 25, at 31 (emphasis in original) (quoting S. REP. NO. 1605, 89th Cong. 2d Sess. (1966), reprinted in [1966] U.S. CODE CONG. & AD. NEWS 3201, 3209).

37. See, e.g., *Richard v. Kaufman*, 47 F. Supp. 337, 338 (E.D. Pa. 1942) (construing Pennsylvania law as requiring strict liability in tort for the pursuit of ultrahazardous activities); *Mazza v. Berlanti Constr. Co.*, 206 Pa. Super. Ct. 505, 509, 214 A.2d 257, 259 (1965) (application of strict liability in Pennsylvania does not remove the necessity of proving foreseeability of damages and causation).

38. 42 U.S.C. §§ 2011-2284 (1976).

court. These federal statutes also affect the resolution of many procedural and substantive issues that have arisen or will arise in the case. For example, Price-Anderson imposes an absolute limit of \$560 million on the amount of damages that can be assessed against defendants.³⁹ The federal statutory scheme significantly affects the nature of *TMI*, even though the actions are grounded in Pennsylvania law. The practical impact of Price-Anderson, however, may be mitigated by Pennsylvania's common-law tort principles.⁴⁰

The NRC has determined that the accident was not an "Extraordinary Nuclear Occurrence" (ENO)⁴¹ within the meaning of Price-Anderson.⁴² Such a determination is called a "negative ENO"⁴³ and is helpful to defendants, for when ENO is found defendants are deemed to have waived the defenses of contributory negligence, assumption of the risk, and charitable or governmental immunity.⁴⁴ In addition, defendants are deemed to have waived statutes of limitations when the claimant instituted the suit "within three years from the date on which [he] first knew, or reasonably could have known, of his injury or damage and cause thereof, but in no event more than twenty years after the date of the nuclear incident."⁴⁵

Ironically, the negative ENO determination in *TMI* may prove beneficial to plaintiffs. The defenses that would have been waived probably were available under Pennsylvania strict liability standards for ultrahazardous activities.⁴⁶ Moreover, according to the United States Magistrate's Report on January 24, 1980, defendants appeared

39. *Id.* § 2210(e). It is extremely difficult to say whether the \$560 million liability ceiling of Price-Anderson will create problems in this case. While the damages that Classes I and II are likely to recover appear to be substantial, the \$560 million limit may be adequate unless a breakthrough of some sort is made by a Class III claimant. The property damage insurance covering the plant was grossly inadequate, and the \$560 million limit would have been seriously deficient had the circumstances been slightly different. At present, it is unclear whether liability will exceed the limit.

40. Magistrate Havas, paraphrasing S. REP. NO. 1605, *supra* note 36, reprinted in [1966] U.S. CODE CONG. & AD. NEWS 3201, 3209, stated "Price-Anderson 'is not a measure designed . . . to accomplish a general revision of American tort law' Thus, Price-Anderson can *not* be viewed as particularly easing a claimant's burden in respect to the traditional tort issues of causation, foreseeability and damages" Report of Magistrate, *supra* note 25, at 31 (emphasis added).

41. *In re Metropolitan Edison Co.*, 11 NUCLEAR REG. COMM'N ISSUANCES 519, 521 (1980).

42. 42 U.S.C. § 2210(n)(1) (1976).

43. Report of Magistrate, *supra* note 25, at 11.

44. *Id.*

45. 42 U.S.C. § 2210(n)(1)(iii) (1976).

46. Report of Magistrate, *supra* note 25, at 11.

ready to concede that their actions caused the accident.⁴⁷ Thus, contributory negligence was not an issue.⁴⁸ Finally, the Pennsylvania statute of limitations⁴⁹ for latent injury appears more permissive than the Price-Anderson limit.⁵⁰ The negative ENO ruling then, although beneficial to defendants, is not harmful to plaintiffs.

C. *Individual Lawsuits by Class III Plaintiffs*

Several plaintiffs in *TMI*, and perhaps other individuals, undoubtedly will press their Class III personal injury or emotional distress claims individually, as the class has not been certified. Coincidentally, Pennsylvania recently announced recognition of the tort of negligent infliction of mental distress.⁵¹ Substantial data on the psychological impact of the accident has been collected and allegedly verifies that the accident had tremendous emotional impact on large numbers of people.⁵²

If these Class III claims are pressed, several difficult and challenging legal issues are likely to arise. In a report that does not yet reflect the opinion of the court, United States Magistrate John Havas has acknowledged the emotional problems suffered by individuals living near the reactor:

In considering the significant aspects of the emotional distress claims in this case relative to the certification question at hand one is struck by the uniqueness of this case. Radiation cannot be perceived by the senses, and for that matter, as conceded by Defendants . . . , "low-level exposures to it do not necessarily leave detectable traces" However, the imperceivable and unknown qualities of radiation only make it all the more frightening.⁵³

47. *Id.*

48. *Id.*

49. PA. STAT. ANN. tit. 42, § 5524(2) (Purdon Supp. 1981) contains a two-year statute of limitations for personal injury cases. The action, however, does not accrue until the injury and the cause thereof is known or reasonably ascertainable. *See Bayless v. Philadelphia Nat'l League Club*, 579 F.2d 37 (3d Cir. 1978).

50. 42 U.S.C. § 2210(n)(1) (1976).

51. *Sinn v. Burd*, 486 Pa. 146, 172-73, 404 A.2d 672, 686 (1979).

52. *See, e.g.*, PENNSYLVANIA DEP'T OF HEALTH, HEALTH RELATED BEHAVIOR IMPACT OF THE THREE MILE ISLAND NUCLEAR INCIDENT (1980)(two parts)(prepared by Peter Hautsth of the Pennsylvania State University College of Medicine).

53. Report of Magistrate, *supra* note 25, at 37 (quoting Brief for Defendant at 13, *In re Three Mile Island*, No. 79-432 (M.D. Pa., Jan. 24, 1980)). The magistrate based his observations concerning the fear of radiation on the Kemeny Report which cautioned:

[I]t is vitally important to remember the fear with respect to nuclear energy that exists in many human beings. The first application of nuclear energy was to

In addition to the emotional impact from imperceivable nuclear radiation, the magistrate found that two additional factors could affect Class III plaintiffs. First, the residents surrounding TMI could not be expected to comprehend fully the precise dangers stemming from the TMI accident.⁵⁴ Even the NRC and Metropolitan Edison did not comprehend the potential danger posed by the TMI accident.⁵⁵ Accordingly, the degree of confusion present at the time of the accident tends to magnify the already substantial fears experienced by many Class III plaintiffs. The confusion factor presumably bodes well for plaintiffs regarding damages. Conversely, the residents surrounding TMI had time for "reflection, decision and study"⁵⁶ as the accident unfolded. This factor militates against plaintiffs, as the traditional mental distress cases have involved sudden and traumatic events such as an "onrushing bull or car."⁵⁷ The reflection factor, however, should not impede recovery because the occurrence of the nuclear accident itself was unprecedented.

With the denial of certification of Class III plaintiffs, *TMI* was reduced to a class action wherein claims could be measured in monetary terms.⁵⁸ *TMI* thus may have a formidable impact on those areas of tort law. Consequently, the outcome will not pass unnoticed by potential planners and investors in a beleaguered nuclear power industry.

The ramifications of *TMI*, however, extend beyond the financial well-being of the nuclear industry. The TMI accident called into question the basic assumption of those who support nuclear energy that serious nuclear accidents were practically impossible. TMI demonstrated that nuclear accidents are a reality. The accident also has raised doubt as to the ability of the NRC to adequately oversee the safety of the nuclear industry. Finally, the accident may affect the public desire for nuclear energy, especially in the minds of those who reside near nuclear power plants.

atomic bombs which destroyed two major Japanese cities. The fear of radiation has been with us ever since and is made worse by the fact that, unlike floods or tornadoes, we can neither hear nor smell radiation.

KEMENY REPORT, *infra* note 81, at 19.

54. Report of Magistrate, *supra* note 25, at 38.

55. *Id.*

56. *Id.*

57. *Id.*

58. See 87 F.R.D. at 439 ("[c]laims for business losses, depreciation in real estate value, and evacuation related expenses will be typical of the claims of Classes I and II.").

III. FEDERAL HEALTH AND SAFETY REGULATION

A. *Judicial Developments*

Several suits against the federal government for failure to uphold its duty to regulate the nuclear power industry so as to protect the public health and safety have resulted from the TMI accident.⁵⁹

Shortly after the accident, a group of citizens living in the Lancaster, Pennsylvania area filed suit in the United States District Court for the Middle District of Pennsylvania to enjoin TMI from discharging any of the million gallons of radioactive water stored at the TMI plant into the Susquehanna River, the area's source of drinking water.⁶⁰ In *Susquehanna Valley Alliance v. Three Mile Island Nuclear Reactor*,⁶¹ these private citizens alleged that the actions and inactions of the NRC and the plant's operators violated the Atomic Energy Act of 1954,⁶² the National Environmental Policy Act of 1969 (NEPA),⁶³ the Federal Water Pollution Control Act (FWPCA),⁶⁴ and various provisions of the United States Constitution. According to the district court, the declaratory and injunctive relief sought by plaintiffs was available only from the NRC.⁶⁵ The court dismissed the complaint for lack of subject matter jurisdiction because plaintiffs had failed to exhaust their administrative remedies before the NRC.⁶⁶

In an opinion that will have a significant impact on the ability of affected parties to challenge actions⁶⁷ by regulated industries and the NRC, the Third Circuit reversed the district court. The Third Circuit agreed with the lower court's ruling that private litigants were precluded from suing to enforce the provisions of the Atomic Energy Act.⁶⁸ The court, however, held that the complaint stated a cause of action within the federal question jurisdiction of the district court under NEPA and the FWPCA.⁶⁹ The court carefully pointed

59. See notes 60-77 *infra* and accompanying text for a discussion of two suits that promise to have a significant impact on regulation of the nuclear industry.

60. 485 F. Supp. 81 (M.D. Pa. 1979), *aff'd in part and rev'd in part*, 619 F.2d 231 (3d Cir. 1980), *cert. denied*, 101 S. Ct. 893 (1981).

61. *Id.* at 83.

62. 42 U.S.C. §§ 2011-2284 (1976).

63. *Id.* §§ 4321-4361.

64. 33 U.S.C. §§ 1251-1376 (1976).

65. 485 F. Supp. at 87-88.

66. *Id.*

67. Another case raising issues relating to discharge of radioactive water has been settled. *City of Lancaster v. NRC*, No. 79-1363 (D.D.C. Feb. 27, 1980).

68. 619 F.2d 231, 237-39 (3d Cir. 1980), *cert. denied*, 101 S. Ct. 893 (1981).

69. *Id.* at 241, 244. In addition, the court concluded that the district court, not the

out that the judicially created "exhaustion of administrative remedies" doctrine does not affect the threshold issue of subject matter jurisdiction, absent clear congressional intent to the contrary.⁷⁰ Rather, the doctrine affects the timing of the claim for relief.⁷¹ Unless Congress relegates matters to the exclusive jurisdiction of an administrative agency, those matters are within the subject matter of the federal district court.⁷² The affected citizens, therefore, may utilize the district court as the appropriate forum for challenging the proper application and enforcement of the federal environmental acts.⁷³

The United States Court of Appeals for the District of Columbia, in *Sholly v. United States Nuclear Regulatory Commission*,⁷⁴ rendered an opinion that should increase the ability of intervenors to challenge proposed actions affecting the environment. In *Sholly*, defendant NRC, without holding a public hearing, allowed radioactive krypton gas to be released into the air.⁷⁵ Congress, through the Atomic Energy Act, gave affected citizens the right to a hearing before the NRC for a broad range of matters.⁷⁶ Nevertheless, the NRC failed to hold the requested hearings prior to the venting of the radioactive gas. The court held that the NRC had violated section 189(a) of the Atomic Energy Act by permitting the gas to be vented prior to the requested hearings.⁷⁷ *Sholly* thus affords intervenors yet another means to protect themselves against arbitrary or untimely NRC decisions that threaten to affect the environment adversely.

B. *Administrative Developments*

At the publication date of this article, the issue of whether the undamaged TMI-1 should be allowed to resume operations has been pending in the Atomic Safety and Licensing Board of the NRC for over two years.⁷⁸ The NRC hearing, in effect, is a review of Metro-

NRC, was the appropriate forum for presentation of a claim alleging that a discharge of radioactive wastewater threatened to violate plaintiffs' constitutional rights. *Id.* at 244-45.

70. *Id.*

71. *Id.*

72. *Id.* at 245.

73. *Id.*

74. 651 F.2d 780 (D.C. Cir. 1980).

75. *Id.* at 783.

76. "[T]he Commission shall grant a hearing upon the request of any person whose interest may be affected . . ." 42 U.S.C. § 2239(a) (1976).

77. 651 F.2d at 789.

78. See generally *In re New Jersey Cent. Power & Light Co.*, [1980] 38 PUB. U. REP. (PUR 4th) 115, 120, (New Jersey Board of Public Utilities efforts to persuade the

politan Edison's performance as a nuclear licensee. The NRC currently is conducting an evaluation of Metropolitan Edison and GPU's reorganization plan. The plan includes improvements in technical training for control room personnel, and improvements in maintenance and repair procedures.⁷⁹

The hearings are particularly interesting because Metropolitan Edison and GPU publicly announced that the TMI accident was the NRC's fault.⁸⁰ The utility companies allege that the NRC neglected to warn of occurrences at other Babcock and Wilcox plants that were similar to those that caused the TMI accident.⁸¹ Metropolitan Edison has filed a claim⁸² with the NRC for compensation of its billions of dollars in accident losses. Undoubtedly, this claim will be followed by litigation. Metropolitan Edison also has filed an action against Babcock and Wilcox claiming that Babcock and Wilcox is responsible for the accident.⁸³

Several billions of dollars are at stake in these lawsuits. Moreover, Metropolitan Edison customers and GPU shareholders will bear a heavy financial burden because of the bureaucratic mistakes of GPU, Babcock and Wilcox, and the NRC. The groups that ultimately will assume liability for the accident, Metropolitan Edison customers, GPU shareholders, and, perhaps, United States taxpayers,⁸⁴ are innocent. The customers and GPU shareholders, are innocent. The bureaucrats, however, are functioning normally while pointing fingers at each other in an effort to divert public attention and financial responsibility.⁸⁵

Regardless of the liability issue, restarting TMI-1 is crucial to

NRC to return TMI-1 to service). *See also* Springfield (Mass.) Morning Union, Dec. 22, 1981, at 6, col. 1.

79. *See In re Metropolitan Edison Co.*, 11 NUCLEAR REG. COMM'N ISSUANCES 408 (1980).

80. N.Y. Times, Feb. 5, 1981, § 1, at 13, col. 1. Metropolitan Edison is the GPU subsidiary which operates TMI.

81. *Id.* *See also* PRESIDENT'S COMM'N ON THE ACCIDENT AT THREE MILE ISLAND, THE NEED FOR CHANGE: THE LEGACY OF TMI 43 (1979) [hereinafter cited as KEMENY REPORT].

82. A formal demand is mandated by the Federal Tort Claims Act, 28 U.S.C. § 2675(a) (1976).

83. N.Y. Times, *supra* note 80. GPU alleged that Babcock and Wilcox "failed to provide information on reactor problems." *Id.*

84. In spite of all this litigation, this author expects United States taxpayers ultimately to assume financial responsibility for the accident since the private industries involved cannot tolerate such a financial drain. *But see Dim Bailout Hopes for General Public Utilities*, BUS. WEEK, Mar. 23, 1981, at 43.

85. For a discussion of the accident and the roles of the various parties affected by it, see NUCLEAR REG. COMM'N SPECIAL INQUIRY GROUP, THREE MILE ISLAND REPORT

the financial well-being of Metropolitan Edison and GPU.⁸⁶ The owners of TMI-1 are losing revenue on their capital investment. They also are purchasing replacement power at great costs. Those costs could be cut substantially by restarting TMI-1.⁸⁷ Local and national citizen and antinuclear groups, on the other hand, are fighting the restart on safety and public health grounds, emphasizing the adverse psychological impact a restart would create.⁸⁸

In an important two-to-two decision, the NRC refused to permit the issue of psychological damage to TMI residents to be included within the health and safety issues considered by the Atomic Safety and Licensing Board.⁸⁹ This decision resulted in spite of the Board's recommendation to the contrary.⁹⁰ The NRC excluded the psychological damage issue, for allowing the issue would have exceeded the agency's statutory authority.⁹¹ The NRC's determination certainly will be reviewed by the appellate courts, as an argument to terminate nuclear production of electricity at TMI probably would not succeed without addressing the fundamental issue of psychological stress.⁹²

TO THE COMMISSIONERS AND THE PUBLIC (1980) [hereinafter cited as ROGAVIN REPORT]. See also KEMENY REPORT, *supra* note 81.

86. See generally N.Y. Times, *supra* note 4, at 11, col. 2, in which a GPU spokesman is quoted as having stated that the utility "has been essentially stripped of its earning power" because, among several factors, TMI-1 will not be allowed to restart until safety modifications are completed. *Id.* (quoting Edward J. Halcombe, Vice President of GPU).

87. See generally N.Y. Times, May 23, 1981, § 4 (Business Day), at 30, col. 5 (announcement by GPU of a long term power purchase agreement with a coal-fired Canadian generating station in Windsor, Ontario, to replace power lost by the TMI shutdown).

88. See, e.g., *In re Metropolitan Edison Co.*, 12 NUCLEAR REG. COMM'N ISSUANCES 607, 613 (1980) (Hendrie, Comm'r), in which intervenor People Against Nuclear Energy (PANE) asserted that the NRC is required to consider the issue of psychological stress in its licensing proceedings.

89. *Id.* at 608.

90. *In re Metropolitan Edison Co.*, 11 NUCLEAR REG. COMM'N ISSUANCES 297 (1980) (Certification to the Commission on Psychological Distress Issues, Special Proceeding).

91. *In re Metropolitan Edison Co.*, 12 NUCLEAR REG. COMM'N ISSUANCES 607, 613 (1980) (Hendrie, Comm'r).

92. But see *id.* at 621 (Bradford, Comm'r, dissenting). Commissioner Bradford noted:

[It] is unlikely that the reopening of TMI-1 could hinge on the psychological stress contentions as framed here. I say this because none of the governmental entities that should be most knowledgeable of a stress situation requiring permanent closure of TMI-1 are presenting such contentions If the state and local entities do not feel that the stress issue warrants their involvement, it will be hard to avoid the conclusion that stress and its consequences are not of such overriding importance to the populace as a whole as to preclude operation of the plant.

Many TMI-area residents experienced emotional upheaval during, and after, the accident.⁹³ The psychological impact of a restart undoubtedly would be substantial, but the NRC will decide if it is substantial enough to warrant consideration as part of the health and safety issue before the NRC.

The TMI accident has had, and will continue to have, a profound impact on federal health and safety regulation.⁹⁴ The developments surrounding the changing powers of the NRC illustrate this impact. First, *Susquehanna Valley Alliance*⁹⁵ and *Sholly*⁹⁶ have made intervenors more effective in challenging the decisions made by the NRC or by any administrative or regulatory agency. Second, charges by Metropolitan Edison against the NRC have questioned the NRC's competency to regulate the industry.⁹⁷ Finally, the citizens' fight against TMI to forestall restart operations may help to redefine the NRC's authority under its enabling act.⁹⁸ Thus, the TMI accident triggered a movement toward a more effective health and safety regulatory scheme and a more accountable NRC.

IV. STATE UTILITY REGULATION

The TMI accident has had a great impact on the development of public utility law on the state level. Faced with unprecedented regulatory problems caused by the outages of TMI-1 and TMI-2, two major electrical generating stations, the utility regulatory commissions in Pennsylvania and New Jersey have had to face a number of difficult issues. These included: (1) Whether to continue to include TMI units in their rate base so that the owner, GPU, could

Id.

93. See 87 F.R.D. at 440-41.

94. For recommendations regarding regulatory reform and for observations on the reasons for the TMI accident, see KEMENY REPORT, *supra* note 81; ROGAVIN REPORT, *supra* note 85. See, e.g., *Friends of the Earth, Inc. v. NRC*, 600 F.2d 753 (9th Cir. 1979) (litigation raising TMI related health and safety issues).

95. 619 F.2d at 246 (discouraging the granting of motions to dismiss under FED. R. CIV. P. 12 despite the doctrine of exhaustion of administrative remedies).

96. 651 F.2d at 787 (dismissing the theory that by a finding of "no significant hazards" the NRC may dispense with the hearing requirement).

97. See generally *In re New Jersey Cent. Power & Light Co.*, [1981] 38 PUB. U. REP. (PUR 4th) 115, in which the New Jersey Board of Public Utilities stated that investigations "clearly establish that the cause of the accident at TMI was not solely limited to operator error but, in fact, was in part related to the structure of nuclear regulation in general." *Id.* at 118 (emphasis added).

98. See 42 U.S.C.A. §§ 5841-5849 (West Supp. 1981). Reorg. Plan No. 1 of 1980, 45 Fed. Reg. 40,561, reprinted in 94 Stat. 780 (1980), is a response to the "need for more effective management of the Nuclear Regulatory Commission." 42 U.S.C.A. § 5841 (West Supp. 1981).

continue to realize a return on its \$1 billion investment;⁹⁹ (2) whether to increase GPU's rates to cover the cost of expensive replacement power purchased from other utility companies;¹⁰⁰ (3) whether to increase rates to cover the cost for cleanup of the radioactive contaminated plant;¹⁰¹ (4) the potential bankruptcy of the owners of the plant and its subsidiaries;¹⁰² and (5) the managerial responsibility and accountability of a regulated utility company for the TMI accident.¹⁰³ The New Jersey and Pennsylvania commissions thus far have dealt with the issues in similar ways. While utility consumers frequently assume the financial risks for minor accidents or power outages, both state commissions steadfastly have refused to make TMI customers insurers for the enormous economic damages caused by the accident. Instead, the commissions have devised a compromise scheme that takes into consideration both the financial detriment to TMI's owners and the innocence of the ratepayers.¹⁰⁴ First, TMI-1 and TMI-2 have been removed from the rate base of the companies on the grounds that the two facilities are not "used and useful" as required by law.¹⁰⁵ The decision has resulted in catastrophic losses for GPU.¹⁰⁶ Lowering the rate base eliminated earnings the companies otherwise would have made on their investment. These downward rate adjustments were made because both commissions believed that it would be inequitable to require consumers to pay both for purchased power costs made necessary by the accident and for the carrying charges, or return on investment, of inactive plants no longer producing electricity.¹⁰⁷ The significance of these precedents should not be underestimated. The commissions are

99. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] 29 PUB. U. REP. (PUR 4th) 502, 507; Grygiel & Zarillo, *supra* note 17, at 13, 25-26.

100. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] 29 PUB. U. REP. (PUR 4th) 502, 504; Grygiel & Zarillo, *supra* note 17, at 24.

101. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] 29 PUB. U. REP. (PUR 4th) 502, 505.

102. *Id.*; Grygiel & Zarillo, *supra* note 17, at 27.

103. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] 29 PUB. U. REP. (PUR 4th) 502, 515; Grygiel & Zarillo, *supra* note 17, at 26-27.

104. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] 29 PUB. U. REP. (PUR 4TH) 502, 507. *See also* Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1981] 37 PUB. U. REP. (PUR 4th) 77. For an excellent summary of the New Jersey response to the Pennsylvania rate scheme, see Grygiel & Zarillo, *supra* note 17.

105. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1981] 37 PUB. U. REP. (PUR 4th) 77, 85-89; Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1979] PUB. U. REP. (PUR 4th) 502, 507.

106. *See* N.Y. Times, *supra* note 4, at 1, col. 1.

107. Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co., [1981] 37 PUB. U. REP. (PUR 4th) 77, 89; Grygiel & Zarillo, *supra* note 17, at 24.

sending a clear message to the financial markets that the financial risks of a nuclear accident are significantly greater than previously thought. As previously indicated,¹⁰⁸ the effects of nuclear accidents on the financial future of nuclear construction are considerable.¹⁰⁹

Second, both commissions have agreed to pass on to customers the huge cost of purchased power, necessitated by the extended outages of TMI-1 and TMI-2.¹¹⁰ Due to GPU's severe cash flow problems, collection of these amounts from GPU's customers has been accelerated.

Third, the Pennsylvania commission has expressed its view that the ratepayers should not bear the cleanup costs of TMI-2. As the maximum property damage insurance coverage is \$300 million, and as present estimates of cleanup costs exceed \$1 billion, both regulatory commissions and GPU have begun to lobby heavily for federal aid as a substitute for ratepayer contributions.¹¹¹ GPU's financial condition is so precarious that it is unlikely it could raise the necessary funds to continue the cleanup without some form of federal aid or large customer rate increases.¹¹²

Fourth, both commissions have expressed the view that bankruptcy of GPU and its subsidiaries is not desirable.¹¹³ If GPU were to go out of business, TMI cleanup expenses merely would shift to some other entity and another utility company would have to assume responsibility for providing electric service. The possibility of separating the cleanup function from the provision of electric service continues to be discussed.¹¹⁴

108. See notes 4-24 *supra* and accompanying text for a discussion of the financial impact of the TMI accident.

109. See Grygiel & Zarillo, *supra* note 17, at 27-28. See also *The Costs of Nuclear Accidents and Abandonments in Rate Making*, 104 PUB. UTIL. FORT. 17 (1979); *Three Mile Island—The Regulatory Challenge of 1979*, 104 PUB. UTIL. FORT. 15 (1979).

110. *In re New Jersey Cent. Power & Light Co.*, [1981] 38 PUB. U. REP. (PUR 4th) 115, 121; *Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co.*, [1979] 29 PUB. U. REP. (PUR 4th) 502, 508.

111. *In re New Jersey Cent. Power & Light Co.*, [1981] 38 PUB. U. REP. (PUR 4th) 115, 120; *Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co.*, [1981] 37 PUB. U. REP. (PUR 4th) 77, 83.

112. See *In re New Jersey Cent. Power & Light Co.*, [1981] 38 PUB. U. REP. (PUR 4th) 115, 117, for the finding by the New Jersey Board of Public Utilities that "GPU, in its present financial condition, cannot sell common equity at a reasonable price." *Id.* The Board also found that GPU's wholly owned New Jersey subsidiary did not have "sufficient coverages to sell long term debt" or preferred stock. *Id.*

113. *In re New Jersey Cent. Power & Light Co.*, [1981] 38 PUB. U. REP. (PUR 4th) 115, 117; *Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co.*, [1981] 37 PUB. U. REP. (PUR 4th) 77, 80-81.

114. See Grygiel & Zarillo, *supra* note 17, for a discussion of the distinction be-

Finally, the commissions of Pennsylvania and New Jersey, as well as the NRC, are reviewing GPU's technical and managerial performance to identify areas in need of improvement.¹¹⁵

V. CONCLUSION

Nuclear technology is an unforgiving science. The ramifications of human error, negligence, or incompetence are so great that another accident would end, or at the very least seriously disrupt, the present experiment with large-scale use of nuclear power to generate electricity. Nuclear energy production is fraught with danger. As no significant market forces operate in the world of the public utility monopoly,¹¹⁶ the government must monitor the nuclear industry and must maintain the highest standards of accountability within the industry.

As the foregoing summary of lawsuits arising from the March 28, 1979, TMI accident illustrates, the ramifications of America's worst commercial reactor incident are broad and significant. The law reacts slowly to society's changing values. It thus remains to be seen whether the TMI lawsuits or the regulations and legislation promulgated since the accident will reflect a dramatic shift in the way the law will deal with future nuclear power problems. As suggested, however, the financial consequences of the accident are severe and these financial realities alone undoubtedly will determine the fate of our national effort to produce nuclear power.

tween the cleanup operation and the provision of electrical service. *See generally* sources cited note 24 *supra*.

115. *Pennsylvania Pub. Util. Comm'n v. Metropolitan Edison Co.*, [1979] 29 PUB. U. REP. (PUR 4th) 502, 515-16; Grygiel & Zarillo, *supra* note 17, at 27.

116. *See* L. SULLIVAN, ANTITRUST § 239 (1977) for a discussion of regulated industries, including public utilities.